

## Portus Augusti: The Claudian Harbour on Sestertii of Nero

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### Introduction

*Sestertii* of Nero, struck at the mints of Rome and Lugdunum, show a detailed scene of the harbour at Ostia. The construction of Rome's first harbour by the emperor Claudius was a major feat of engineering, and it vastly increased the city's ability to import grain and other goods from all over the empire. This study presents an iconographical analysis of these coins based on archaeological evidence for the layout of the Claudian harbour and ancient depictions of ships and harbours. The die engravers employed images from their standard visual repertoire to depict the harbour buildings, but rendered the various ships and boats in exacting detail. Nero's Ostia *sestertii* celebrate the security and prosperity provided by the harbour of Claudius but also serve as a reminder of the emperor's own endeavours in expanding the Mediterranean trade infrastructure.

### Historical Context

Rome is a fluvial city. It grew up on the banks of the Tiber River, about 25 kilometres from the Tyrrhenian Sea. In the late fourth or early third century BC, Rome extended its power to the sea, constructing sturdy walls at the mouth of the Tiber (Martin 1996) and naming the settlement Ostia. Over the centuries, Ostia grew as Rome's maritime façade, although it lacked a natural harbour. In the first half of the first century AD, a harbour was constructed at the mouth of the Tiber (Heinzelmann and Martin 2002), but ultimately this was insufficient for handling the enormous quantity of grain required to feed the ever-growing population of Rome. In AD 42, the emperor Claudius undertook the construction of an artificial harbour four kilometres north of Ostia. It was an enormous task, but crucial for the welfare of Rome. Cassius Dio (60.11.1) relates that the Romans had been in the grips of a severe famine and that the emperor Claudius decided to remedy this by creating a port

near Ostia. The architects insisted that the cost was prohibitive, but Claudius went ahead with his plans: 'He excavated a very considerable tract of land, built retaining walls on every side of the excavation, and then let the sea into it; secondly, in the sea itself he constructed huge moles on both sides of the entrance and thus enclosed a large body of water, in the midst of which he reared an island and placed on it a tower with a beacon of light' (Cassius Dio 60.11.5; Trans. Cary 1924).

The end result was enormous. The port encompassed an area of 69 hectares, sufficient to welcome the steady stream of merchant vessels loaded with grain and other goods from all over the world. The harbour of Claudius, however, did not completely succeed in solving the problem of the grain supply. In AD 62 another crisis arose as a result of a terrible storm by which 'two hundred vessels actually in port had been destroyed...and a hundred more, which had made their way up the Tiber, by a chance outbreak of fire' (Tacitus, *Annales* 15.18.3; Trans. Jackson 1994). Tacitus says that Nero threw rotten grain into the Tiber after this event in order to quell the population's anxiety about possible food shortage. Ultimately, Trajan would construct a hexagonal inner harbour to provide additional protection for ships, and the harbour facilities and the surrounding community eventually came to be known as Portus.

In AD 64, two years after the devastating storm, the mint of Rome struck a large quantity of *orichalcum* coins for the first time in nearly a decade. The large, bright *sestertii* made fine canvases for the die engravers, who produced detailed portraits of the emperor Nero on the obverse and elaborate pictures on the reverse. Among the reverse types to adorn these *sestertii*, two celebrated Rome's grain supply. The divine personification of Rome's grain dole, the Annona, made her first appearance on Roman coinage (e.g. RIC 390). Holding a *cornucopia*, she stands opposite the seated goddess Ceres, and the prow of a ship looms in the background. Ships

are the central focus of a panoramic scene of the Claudian harbour (RIC 178–183), surrounded by buildings, statues and gods, and tiny figures of men carrying out their duties (Figs. 1 and 2). In July of 64, the great fire of Rome broke out, and there was a need for minting more gold and silver during the massive rebuilding. Although several more bronze issues were produced, they were on a smaller scale and the Ostia harbour reverse was discontinued at Rome.

Roughly a year after the bronze production at Rome, the mint at Lugdunum also produced a large *orichalcum* issue (RIC 440, 441), using many of the same images employed at Rome (Fig. 3). The style of Nero's obverse portrait distinguishes the two productions. The Lugdunum portrait is characterised by a small globe at the front of the neck and an M-shaped bust truncation, while the Rome portrait has a straighter bust termination (Mac Dowall 1979, 15–16).

The Ostia *sestertius* passed through two more issues at Lugdunum, one in 66 (RIC 513, 514) and another in 67 (RIC 586–589). Despite its popularity, the harbour scene on the Lugdunum *sestertius* lacks the exquisite detail often present in the Rome issue, although the essential architectural and naval elements are identifiable, as are the small figures of men on the ships. Rather than producing a sharp and detailed image of the harbour, the die engravers at Lugdunum seem to have been content with providing an overall impression of the scene.

Even the most worn and poorly struck examples of the Ostia *sestertius* display an architectural complexity heretofore unknown on Roman coinage, and this alone invites a close iconographical analysis. Beyond its artistic value, this coin is of great importance to historians and archaeologists because it tells a story of the harbour that is not embedded in the archaeological remains or described in historical accounts. It shows us how the artisans who engraved the dies perceived the Claudian harbour and even reveals some of the messages conveyed by the image of tiny vessels floating in an *orichalcum* sea.

The architectural images on coins are unlike photographs. The depiction of a building or monument on a coin may or may not be strongly related to the actual appearance (or even existence) of the structure it represents, or it might appear years before the

structure is completed (Burnett 1999, 138–143). At first glance, it is clear that the harbour on the Ostia *sestertius* cannot be accurate in scale; a handful of ships and boats seem to fill the whole basin, which in reality was well over a kilometre wide. A more detailed comparison between the archaeological remains of the Claudian harbour and its depiction on the *sestertius* demonstrates that die engravers employed a combination of ground-truth accuracy and imagination to produce an impression – but not a snapshot – of a real place. This act of architectural interpretation gives us something more valuable than a photo: it allows us to see what aspects of a structure were considered to be the most important by the people who commissioned and designed the coins (Burnett 1999, 152).

This study seeks to understand the choices that the die engravers made in the extraordinary task of rendering the entirety of the Claudian harbour – its layout, its architecture, its ships and its gods – onto the 34 millimetre flan of a *sestertius*. The Ostia *sestertius* is an excellent specimen for a study of the die engravers' interpretive choices for several reasons. First, archaeological evidence of the Claudian harbour has survived. In recent years, research carried out at the site of the ancient port facilities near Ostia has drastically increased our knowledge of their layout. Moreover, a wealth of comparative evidence for ancient ships, boats and harbour facilities survives not only at other archaeological sites, but also in depictions on ancient coins, mosaics and reliefs.

Finally, the different dies of the Ostia *sestertius* do not vary greatly in the important details. The most noticeable variation is the number of ships and boats depicted in the harbour scene; any given die always has a minimum of six ships and boats (but never fewer) or as many as eleven. Three specific vessels always appear in approximately the same position on every die, and additional boats are added at the die engraver's discretion. Other variants include the presence or absence of human figures, and the number of columns or arches can change slightly according to the die. This overall consistency in the structure of the architectural features and the type and layout of the primary ships minimises the difficulties presented in an iconographic analysis of the coin based on archaeological evidence. This iconographical analysis forms

the basis for understanding the role the harbour imagery played in Rome and the Western Provinces when it was first circulated in the 60s AD.

### Investigations of the Harbour Area in the Modern Period

Like Ostia, the Claudian harbour and the Trajanic basin no longer lie on the sea. The coastline advanced steadily seaward from the Middle Ages until the nineteenth century. Today the Claudian basin is partially covered by the Leonardo da Vinci airport, and the Trajanic basin is now a lake. Portus and its environs were excavated in the eighteenth and early nineteenth centuries, but had been explored and plundered in preceding centuries (Paroli 2005). The harbour area was of particular interest to antiquarians, historians and artists during the Renaissance, and a great deal of written and visual documentation from this period survives (Paroli 2005, 43–46). The maps and plans of Portus from this period, although generally accurate in scale and measurements, are the products of scholars who wished to present a complete picture of the port of Rome (Paroli 2005, 43). Figure 4 is an engraving of an annotated sixteenth-century map of the Claudian and Trajanic harbours. The artist has clearly embellished the scene to depict the harbour at the height of its glory. The sketch of Nero's Ostia *sestertius* in the lower right-hand corner demonstrates that the artist consulted the coin to build his picture of the Claudian harbour. The Ostia *sestertius* was so popular in the sixteenth century that it was recreated by famed forger-cum-artist Giovanni Cavino, and many examples of that medallion exist in collections to this day.

The artists of the Renaissance did not rely entirely on imagination to recreate the harbours, since many ruins were still visible and partially submerged in the ever-retreating sea. A sixteenth-century fresco in the Vatican Gallery of Maps depicts a birds-eye view of the visible remains of the harbour. It shows the hexagonal Trajanic basin still filled with water, but the Claudian harbour is mostly grass, with only bits of the island and the end of the moles visible in the sea. The basic outline of the harbour and its facilities are still visible in the form of ruins. Using ground-truth data collected through drillings in the harbour (Morelli et al. 2011), one archaeologist has

demonstrated the accuracy of this fresco (Arnoldus-Huyzendveld 2011).

Large-scale excavations were carried out during the construction of the Fiumicino airport in the 1950s. Excavations directed by Testaguzza revealed a significant portion of the northern mole of the Claudian harbour, which was carefully documented and photographed (Testaguzza 1970, 82–89). What remains of the mole is a breakwater of basalt blocks topped by rows of travertine, with an average width of 3.30 metres, although it is considerably wider in some places where cement forms have been set over the blocks (Testaguzza 1964, 177). It appears to have been constructed according to the recommendations of Vitruvius (*De Architectura* 5.12.2-6), using methods developed to contend with the problem of building on a soft or muddy sea bottom (Raban 1980, 761).

Our knowledge of Portus and its environs has increased significantly due to research carried out by the Portus Project, which began in 1998 and remains an active project in 2013. The archaeologists of the Portus Project have employed excavation, geophysical survey and a host of specialist techniques to reconstruct the phases of the harbour and the geomorphological history of the area. This ongoing work is regularly published in journals and in monographs (Keay et al. 2005a; Keay and Paroli 2011), thereby constantly contributing to our understanding of the harbour. The Portus Project has produced plans showing every major phase of Portus. Their reconstruction of the earliest phase of the Claudian basin (Fig. 10) allows us to compare the layout of the harbour on the Ostia *sestertius*. The plan shows that the arms of the moles extend into the sea and curve in toward the island that supported the lighthouse, thus confirming the description of Cassius Dio. Further investigation (Morelli et al. 2011) has recently shown that the lighthouse island was situated slightly more to the west of the moles, which probably allowed for slightly more space for ships to enter and exit the harbour. To the east of the harbour was a small inner basin, the *Darsena*, where cargo could be offloaded for immediate passage up the Tiber River or for storage in the warehouse facilities along the *Darsena*. The so-called *Fossa Traiana* connected the Tiber with the inner harbour. Both the *Darsena* and the *Fossa Traiana* were integral to the original design of the

harbour and were completed under Nero (Keay and Millett 2005, 275–277). Nero also carried out the installation of the aqueduct that supplied the port area with fresh water (Keay and Millett 2005, 278; Keay et al. 2005b, Figs. 5.43, 45.44, 45.52, 45.53). Nero's role in the construction of the Claudian harbour was not insignificant, and must have been a factor in his decision to depict the harbour on one of his *sestertii*.

The most striking architectural feature of the Claudian harbour in its early phases was the Portico of Claudius, which dominated the eastern end of the harbour. Unfortunately, most of the structures dating to the earliest phases of the harbour are no longer extant, having been built over in later phases or destroyed in subsequent centuries. But the archaeological remains provide us with sufficient evidence to undertake an analysis of the architectural features and layout on the harbour *sestertius*.

### The Moles and the Architecture

First, let us orient ourselves by comparing the harbour on the *sestertius* to the archaeological reconstruction (Fig. 10). The entrances to the harbour on either side of the lighthouse lie to the west; this is at 12 o'clock on the *sestertius*. The statue at the top of the coin indicates the approximate position of the lighthouse. The curve of the *sestertius* is perfect for mimicking the approximate shape of the harbour. The left side of the coin represents the southernmost side of the harbour, and the right side represents the north. At 6 o'clock a water deity reclines – perhaps an actual statue located in the eastern areas of the harbour, but more likely a symbolic image added by the die engraver.

Monumental colonnaded structures dominate the left edge of the *sestertius*. Every reverse die shows a peripteral temple with a peristyle, roof and pediment at the top of the line of buildings on the left side; an altar with a figure sacrificing in front of it is visible on most dies (Figs. 1 and 2). Onboard the lower left-hand ship on an example of the Lugdunum Ostia *sestertius* (Fig. 3), another person appears to be sacrificing on a small altar. Sacrifice was integral to the life of a Roman harbour, and particularly at Ostia, which welcomed the grain fleets. Sacrifice at the Ostian harbour appears elsewhere in ancient iconography. A medallion of Commodus

shows the emperor standing before the lighthouse in the harbour, having slain a bull (Grueber 1874, pl. 35). Even more evocative is a scene on the Torlonia relief, a third century depiction of the Ostia harbour (Fig. 5). Onboard a ship just sailing into the harbour a woman and two men are carrying out a sacrifice in thanksgiving for a safe arrival.

Next to the temple stretch two long buildings also showing peristyles, pediments and roofs. These structures and the temple all appear to sit upon the mole, and this feature is reflected in the sixteenth-century artist's rendition of the site (Fig. 4). The question arises whether the southern mole could have supported structures of any significant size. While the location of the southern mole has been identified, it has not been excavated and we do not know how wide it was. We might, however, extrapolate from the evidence provided by the northern mole and assume that the southern mole was an average width of 3.30 meters. If this was the case, it does not seem likely that the mole would have been able to support such substantial structures. It may have been only a simple line of blocks rising from the water with a watchtower at the end and perhaps other small structures along its length. A sarcophagus purportedly from Ostia shows three ships entering a harbour between a small lookout tower and the lighthouse, which supports the possibility of minor structures on the moles (Østergaard et al. 1996, 77–79). Many dies from the Rome mint show a small figure sitting on the mole to the right of the entrance; he sits out in the open, but the presence of a guardhouse on one or both of the moles is quite likely.

It seems that rather than depicting somewhat unexciting architectural details, the die engravers chose to include structures from other areas of the harbour. The long porticoed buildings probably represent the portico of Claudius or possibly the storage facilities around the *Darsena*. The temple on the coin appears generic, and may represent a temple from around the harbour, although it is not impossible that a very small temple or altar was erected on the mole itself.

Sutherland (1984, 157) describes the building represented on the right side of the coin as 'breakwaters or slips.' To interpret this structure as a series of slips requires that the artist is viewing it from above. The colonnaded storage facilities on



the left side of the coin are clearly viewed from the water, and it seems likely that the right-hand structure would be depicted from this perspective as well (Carlton 1986, 18).

Traditionally, the design of the structure on the northern mole has been interpreted as a method of allowing fresh water into the harbour. The description of the northern mole provided on the sixteenth-century map (Fig. 4) reads: *murus maioris portus occasum versus, in arcus, quo mare fluxu arenas expelleret, constructus* ('the wall of the larger port situated to the west, constructed in arches, so as to push out sand by the movement of the sea'). Nineteenth-century marine engineer Sir John Rennie also interpreted the design of the northern mole in this way: 'The circular part of the northern pier or mole of Ostia was open or constructed upon arches, so as to give free access to the current, but sufficiently close and solid to break the waves and produce tranquility within' (Rennie 1851, 321). Another source refers to 'arcades' on moles as a main constituent of ancient harbours, 'which had for their object the cleansing of the inside by pouring in a stream of water' (Müller 1850, 333). Evidence for sediment-flushing technology exists at sites such as the Herodian harbour of Caesarea Maritima, where a system of channels with grooves for wooden sluice gates was installed to allow fresh water into the basin (Raban 1980, 759–763; Hohlfelder et al. 1983, 147). Surplus water was allowed into the harbour during high sea conditions, and would create a current by flowing toward the entrance to the outer harbour, thereby slowing down the silting process.

The archaeological remains for the northern mole of the Ostian harbour have not preserved evidence of a system for silting management. It is uncertain whether such a method would have been effective at this site, but the issue certainly deserves further study.

Another possibility to consider is that the structures depicted on the northern mole are, like those on the southern mole, to be sought elsewhere in the harbour facilities. The series of arched openings strongly recalls the form of a line of shipsheds, in which ships were constructed, repaired and overwintered. The earliest evidence for a monumental shipshed facility discovered at Portus dates to the Trajanic period (Keay et al. 2012). In the first

century AD, however, shipsheds were constructed as part of the port facilities at the mouth of the Tiber, just a few kilometres south of the Claudian harbour (Heinzelmann and Martin 2002).

The archaeological evidence for the moles is insufficient to establish precisely how the die engravers chose to interpret their form and function in the harbour. We can confirm that the layout of the harbour on the round *sestertius*, with the moles embracing the harbour basin and the twin entrances on either side of the lighthouse, mimics the evidence for the layout of the harbour as interpreted by the archaeologists working on the Portus Project. The colonnaded buildings, the temple and the arched mole are never depicted in precisely the same way on any two dies, although the difference lies primarily in the number of arches and the number of columns. The accurate representation of such large and extensive structures on a small coin would serve no obvious purpose, and might in fact have been impossible. In representing the main harbour facilities, the die engravers chose to approximate their form and appearance without paying special attention to minor detail.

### The Water God

At the bottom of the harbour, opposite the entrance, the figure of the water god reclines on waves and leans on a dolphin with a rudder in the crook of his elbow. He is usually identified as the river Tiber in catalogue descriptions and reference works (Mac Dowall 1979; Sutherland 1984). Yet the Tiber is never depicted with a dolphin, which is a creature of the sea. The Tiber is typically shown reclining on an amphora holding reeds or a rudder with his hand resting on a boat, as is shown on the reverse of a *sestertius* of Antoninus Pius (RIC 642). Oceanus and Neptune are alternate identifications, but Oceanus usually holds an anchor, and Neptune is not associated with rudders. Indeed, this water god is most likely to be a representation of the Ostian harbour itself. The nearest parallel can be found on a provincial bronze coin of Antoninus Pius, which depicts the harbour of Pompeiopolis (ANS inv. 1944.100.54319). The god also lies on waves with a dolphin and a rudder, but he fills the central field of the coin. In her analysis of this provincial bronze, Boyce recognized the similarity

between Nero's Ostia *sestertius* and the Pompeiopolis coin and concluded that both water gods were the 'peculiar deities of the place where the rivers flowed into the ocean known as the Mediterranean sea' (Boyce 1958, 71). The dolphin seems to represent the untamed, wild sea and the rudder is the instrument that guides the boats through the ocean, into the harbour, and up the river. The harbour is quite literally the liminal space between land and sea, and the contrasting symbols of the dolphin and the rudder are appropriate for the deity presiding over the port.

### The Lighthouse

The tall figure standing at the entrance to the harbour is thought to represent Ostia's lighthouse. The coin itself provides no hint as to the identification of the statue. It is often presumed to be a representation of Neptune, although Nero has been put forth as a possibility (Donaldson 1965, 334).

The construction of the lighthouse was of considerable interest to ancient authors, although they made no reference to statues associated with the harbour. Suetonius (*Divus Claudius* 200.3) related that '[Claudius] constructed the harbour at Ostia by building curving breakwaters on the right and the left, while before the entrance he placed a mole in deep water. To give this mole a firmer foundation, he first sank the ship in which the great obelisk had been brought from Egypt, and then securing it by piles, built upon it a very lofty tower after the model of Pharos on Alexandria, to be lighted at night and guide the course of the ships' (trans. Rolfe 1997).

This construction method is echoed by Pliny (*Naturalis Historia* 16.76.201–2; 36.14.70) who emphasises that cement moles 'as tall as towers' were fitted onto the hull of the ship to create the island. During excavations at the harbour site in the 1950s archaeologists uncovered a massive foundation of concrete that appeared to preserve the internal structure of a ship; they concluded that this was the remains of the *mirabilis navis* of Caligula that indeed formed the base for the lighthouse island (Testaguzza 1964; Scrinari 1971). In fact the concrete form of this ship served as a foundation for a wider section of the northern mole (Paroli 2005, 53). The actual foundation of the lighthouse has not been excavated, although its location has been

verified by soundings carried out by the Portus Project archaeologists (Morelli et al. 2011).

We know that a statue stood on the Pharos of Alexandria, although its precise location on the lighthouse and its identity are unknown (McKenzie 2007, 42–43). Since the Ostia lighthouse was built in emulation of Alexandria's, it stands to reason that it was also fitted with a statue. The Ostia lighthouse was a popular image on mosaics (Fig. 9) but a statue is never depicted upon it. A number of statues are shown in the harbour on the Torlonia Relief (Fig. 5). One is depicted standing on the second tier of the lighthouse, but its pose is unlike that of the statue on the *sestertius*. The lighthouse statue on the Torlonia relief is shown holding his staff with his right hand and a cloak hangs from the crook of his left elbow, while the *sestertius* statue appears to hold up a staff with his left hand while he extends his right arm toward the temple. The faint image of an unidentifiable object appears just above the palm of the right hand. This variation in representation is not necessarily significant; as Burnett has pointed out, statues on coins are often products of a die engraver's 'visual repertoire' and are not always meant to render a specific statue accurately (Burnett 1999, 139). But there is reason to believe that the statue on Nero's *sestertius* might have been rendered accurately.

The statue of Neptune standing before the lighthouse at the centre of the Torlonia Relief bears a resemblance to the *sestertius* statue. He holds a tall trident in his left hand and holds out a shell in his right hand, but he bears his weight on his right hip instead of his left. Is this the statue represented on the Ostia *sestertius* – that is to say, not a statue *on* the lighthouse, but one in front of it?

Two additional pieces of evidence might assist in the identification and location of this statue. The first can be found on an early third century mosaic from the 'House of the Harbour Mosaic' at Ostia (1, XIV, 2). This black-and-white mosaic shows the harbour replete with gods, sea creatures, fishermen and boats. The lighthouse is also depicted, six storeys high, with a statue of Neptune before it (Becatti 1961, Tav. 161). Neptune holds the trident in his left hand and his right hand, extended, offers a fish or dolphin to a man in a small boat. Neptune's stance is identical to the depiction on the Ostia *sestertius*; his weight is on his right hip and his left

knee is bent. The pedestal on the coin and the mosaic are also the same form, although the coin shows the pedestal on a square base and the mosaic appears to stand on a ground line or directly on the water. The second piece of evidence, although rather tenuous, is provided by the Renaissance engraving (Fig. 4), which shows the statue standing before the lighthouse. Although the artist who created this image relied on the coin to imagine the harbour in its heyday, the coin itself does not show a statue in front of the lighthouse. The artist must have had other reasons for placing a statue before the lighthouse. Perhaps remains of a statue base could still be seen in the sixteenth century, or perhaps the artist relied on other visual sources.

In light of this evidence it appears that the statue on the coin may not be a sort of architectural synecdoche for the Ostian lighthouse, but a feature of the harbour in its own right. It may have stood on the lighthouse island or on its own small mole. The square structure below the statue base might represent a portion of the lighthouse itself. The five evenly spaced columns extending from the bottom of the square into the ocean could represent the cement supporting moles mentioned by Pliny the Elder in his description of the construction of the lighthouse.

The die engravers probably avoided depicting the lighthouse structure because of its similarity to the Pharos of Alexandria, which could have resulted in confusion over which port was being depicted in the scene. The evidence provided by the sixteenth-century engravings and especially by the harbour mosaic suggests that a monumental statue of Neptune might have been a feature of the Claudian harbour, in addition to whatever statue stood upon the lighthouse itself. However, for the purposes of interpreting the layout of the harbour, the statue clearly stands at the entrance, in the location of the lighthouse.

## The Ships

The configuration and number of the vessels in the harbour is the greatest variable between the reverse dies. From dozens of examples from the Rome mint, I have identified 15 reverse types. Six is the minimum number of vessels I have counted on any reverse, and the maximum is eleven; most

reverse types have seven vessels. Despite these variables, the engravers were not exactly given free license to change the harbour scene at will. Three specific ships *always* appear in the same location on every reverse type: a large merchantman, which rests at the centre of the harbour, a merchantman entering the harbour under full sail to the left of the lighthouse, and a galley speeding out to sea to the right of the lighthouse. In addition to this canon of three, a given reverse type typically has two or three additional sailing ships either offloading from the central merchantman, docked at the warehouses on the left, or anchored in the harbour. These can be merchantmen or lighter, faster coastal vessels. At least one small oared boat is also shown making its way between the larger ships.

The astonishing level of detail paid to the representation of the harbour vessels lends a great deal of verisimilitude to the scene. In the finer examples of this coin, the ships are rendered with a precision that suggests that the die engraver had an intimate familiarity with ships. Several extensive studies of shipwrecks and other artifacts provide us with a wealth of knowledge about the construction and use of ancient ships. These insights can help us to understand the form and function of the ships on the Ostia *sestertius* (Landström 1961; Casson 1971; Steffy 1994; Pferdehirt 1995; Pomey 2004).

The precision with which the vessels are portrayed permits accurate identification, thereby inviting us to ‘read’ the story of a day in the life of the harbour – or at least, an idealized version thereof. Let us begin with the central ship. The merchantman, or *navis onoraria*, was an enormous sailing ship designed to transport a great deal of cargo such as grain. They are identified by their great size and their big, rounded bellies which gave them their second name, *corbita*, meaning ‘basket’ (Casson 1971, 169–170). The merchantman appears on a number of mosaics from Ostia (Fig. 9) as well as the Torlonia relief (Fig. 6) and many sarcophagi, such as this one from Sidon (Fig. 7). The close similarity between the Sidon sarcophagus and the merchantmen depicted on the coins shows how faithfully the tiny images of the ships were rendered.

At the back (aft) of the ship curves the figurehead of a swan or goose, a very recognisable feature of ships from this period (Torr 1894, 67). A balcony

extends out beneath the swan, over the stern, where the captain or crew could stand and look out over the sea. The boxy shape situated on the vessel is the deckhouse, which provided cabins for the officers and important passengers. This was a crucial feature of a ship designed for long journeys such as the grain run between Alexandria and Rome, which could take weeks or months depending on the weather and time of year (Casson 1951, 145).

Even greater detail of the ship's construction can be seen on areas of the coins where the surface of the ships is not worn away. The horizontal reinforcements along the sides of ships, known as wales, act as huge wooden girdles that strengthen the outer hull of the ship at its greatest lines of stress. Even the brails, which are vertical ropes used to haul up the sail, are visible. The sail has just now been secured, and the tiny figures of two sailors can be seen – one scrambling down a brace by the stern, and the other sliding down the yard.

Forward, a gallery extends around the bow. In Fig. 1 a smaller craft is linked to the gallery of the merchantman. A sailor with a sack hung over his back strides to the front of the vessel. He is unloading goods from the large merchant vessel onto a *navis codicaria* (alternately *caudicaria*) a vessel designed to sail along the coast and to be towed upriver; their sturdy masts doubled as towing masts (Casson 1971, 332–334). The *naves codicariae* were crucial for the transport of goods from the harbour to Rome, and are ubiquitous in ancient ship imagery (Casson 1965, Pl. II, III & IV). An example still *in situ* at Ostia can be found on a mosaic from the *Piazzale delle Corporazioni* (Fig. 8), on which a sailor unloads cargo onto the river vessel. An inscription from Ostia (CIL 14.4144, line 12) even names the guild of the boatmen in charge of these tugboats: *corpus splendeditimum codicariorum*.

Five ships were excavated from the area of the Claudian harbour in the 1950s and 1960s (Scribani 1979). The Fiumicino 1 wreck has been identified as a *codicaria navis*, which probably dates to the fourth or fifth century AD (Boetto 2000). Thus the *navis codicaria* played an important role in the workings of the harbour from its inception well into late antiquity.

In other dies (Fig. 2) a smaller sailed vessel is fastened to the quay for unloading. It lacks the cabin necessary for long journeys, so perhaps this is an *actuaria*, one of the many types of merchant galleys that skimmed the coast, hopping from port to port (Casson 1971, 159–160). The *actuaria* was an oared vessel, but its oars would have been pulled in at the port. The other ships scattered throughout the harbour on various dies are either these coastal merchant vessels or *naves onorariae*, although none are as large as the central figure. Unfortunately, the smallest boats in the harbour are less clear and detailed because they are miniscule. On Fig. 1, there is a small, multi-oared vessel to the left of the water god's hand, and another small vessel with perhaps two oars to the right of the lighthouse. These may represent the flat-bottom tugboats (*lenunculi*) (Casson 1971, 336). The men known as the *lenuncularii pleromarii auxiliarii* helped transport cargo from ship to shore, and the checking and recording clerks (*lenuncularii tabulatorii auxiliarii*) led ships to their berth and made inventory (Casson 1965, 34–36; Aldrete 2004, 213). In fact, none of the merchant vessels shown sitting in the harbour on Nero's *sestertius* would have entered the harbour under their own power, but would have been carefully towed by a *lenunculus* to a specific berth for unloading (Casson 1965, 34).

To the right of the lighthouse statue, a Roman war galley makes its way out of the harbour and into the sea. Fig. 6 shows a painting of a similar galley on a fresco from Pompeii. The galley on the *sestertius* has its *artemon* sail raised to guide it from the harbour. A distinctly Roman feature of this galley is the 'doghouse' at the rear that protected the commander from the elements (Casson 1971, 147). Although the Claudian port was primarily used for the importation of grain, this galley is an unequivocal symbol of Rome's naval power, Mediterranean hegemony, and the safety of the Italian coast. On the other side of the statue, another *navis onoraria*, probably packed with grain from Alexandria, enters under full sail. This would have been an impossible feat for such a large ship, which would have needed a tow into the harbour, but the billowing sail lends an air of immediacy to the scene, and contains an implicit promise of continued prosperity and abundance.



## The Inscriptions

The most crucial difference between the Rome issue and the Lugdunum issue is the variation in reverse inscription. At Rome, the inscription typically reads AVGVSTI POR(tus) OST(iensis), S(enatus) C(onsultu), *the Ostian port of Augustus, by senatorial decree*. At Lugdunum the inscription reads simply PORT(us) AVG(usti), S(enatus) C(onsultu), *the port of Augustus, by senatorial decree*.

The inscriptional variation suggests that the harbour *sestertii* conveyed a different message in the western provinces than in the capitol. By specifying the harbour as Ostia on the Rome issue, the coins celebrated the enormous architectural achievement of the harbour and the increased security it brought to Rome's grain supply. Yet the toponym is absent on the Lugdunese examples, which ultimately changes the message. *Portus Augusti* calls to mind all the Roman harbours scattered throughout the Mediterranean. The Lugdunese issue is thus a celebration of trade and a reminder of Roman hegemony – the port on the reverse is no longer Ostia, but the abstract, all-encompassing 'everyport'. Yet another message may have been conveyed through this *sestertius* to the Roman citizens and other elite of Lugdunum with strong ties to Rome. The emperor Claudius was born at Lugdunum, and in AD 48 he successfully pleaded the case to admit Gaul's elite to the senate (Tacitus, *Annales* 11.24). The famous bronze Lyon Tablet, inscribed with the words of the emperor's speech, is evidence of the high regard Lugdunum held for Claudius. For those who knew of Claudius' role in constructing Rome's harbour, this coin may have been a potent reminder of their benefactor.

## Conclusion: Multivalent Messages

The die engravers at the Rome mint made a number of choices when rendering the Claudian harbour onto the small canvas of a *sestertius*. The general layout of the harbour, with its double entrance on either side of a lighthouse and the curving line of the moles, is an accurate portrayal. The structures on either side of the coin seem more impressionistic, which stands to reason, since they represent very large buildings and an extreme degree of accuracy would be pointless – it is highly

unlikely that anyone but the architects themselves knew the precise number of columns on the Portico of Claudius.

The engravers' ability to depict minute detail is evident in the exquisite representation of the vessels in the harbour. When we consider that even the enormous grain ship in the centre of the coin is in fact a mere 6 or 7 millimetres wide, and yet afforded a level of detail similar to the ships on the much larger Torlonia Relief or the Sidon sarcophagus, we must conclude that the ships and boats are literally and figuratively the centrepiece to this *sestertius* and the message it conveys. The loss of 200 ships and their cargo in the great storm of 62 would have been a source of concern for the people of Rome, and the image of the bustling harbour full of vessels is a clear message that grain is abundant, and the crisis has passed. The degree to which Rome depended on grain from sources outside Italy in the first century AD was probably less than in later centuries (Fulford 1987, 68), but the importation of grain and other goods was nevertheless crucial for sustaining Rome's population and assuaging fears of future shortages; as Boyce so aptly stated, 'a functioning imperial harbour full of unshattered ships seems as yet to be the one sure message of the coins' (Boyce 1966, 66). The concurrent production of the *sestertius* depicting Annona, Ceres and the ship prow is further confirmation that advertising the security of the grain supply was an important issue at this time.

The variety of boats and ships depicted also enhances the verisimilitude of the harbour scene. The great god of Portus reclining with his rudder and dolphin is a symbol of the harbour; the lighthouse statue, storage facilities and breakwaters recall the architectural accoutrements of a harbour; the reverse inscriptions even *tell* us that it is a harbour – but it is the ships and boats that represent the soul and purpose of a harbour.

The striking of this coin in 64 may have commemorated the dedication of the harbour or the ten-year anniversary of its dedication (Meiggs 1973, 55–56), and some scholars have thought that Nero attempted to take undue credit for its construction by depicting it on his coins (Boyce 1958, 74–75). The recent excavations and research carried out by the Portus Project has revealed that the Claudian harbour was a work in progress through the end of

the first century AD; not only the aqueduct, but also the initial construction of the *Darsena* took place under Nero (Keay and Millett 2005, 276–277). In addition to his work on the Claudian harbour, Nero demonstrated a great interest in strengthening the infrastructure of the Mediterranean trade networks. He was responsible for the construction of the harbours at Antium (Felici and Balderi 1997) and Leptis Magna (Bartoccini and Zanelli 1958, 14–15). He initiated the excavations of a canal through the Isthmus of Corinth and another canal connecting Ostia to Lake Averno, although both projects were abandoned after his death (Suetonius, *Nero* 19, 31.5; Tacitus, *Annales* 15.42; Pliny, *Naturalis Historia* 14.61). The harbour scene on Nero's *sestertius* is an appropriate homage to the emperor's attempts to make the world a more navigable place.

This wonderfully evocative coin must have held myriad meanings for the people who passed it from purse to purse in antiquity, and it is impossible to unpack and examine every elusive message in the same way we can examine and describe the physical object. The clearest message, however, is the one conveyed by the intricate little ships and boats

in the harbour, and that is a message of prosperity, abundance and the limitless potential of the sea. We can be sure that future archaeological discoveries and insights will continue to inform and revise our understanding of how the die engravers chose to depict the harbour 'in the round'.

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Fig. 1 Nero sestertius, mint of Rome (AD 64). © Trustees of the British Museum.



Fig. 2 Nero sestertius, mint of Rome (AD 64). Courtesy of Classical Numismatic Group, Auction 87 lot 967 (18 May 2011).



Fig. 3 Nero sestertius, mint of Lugdunum (AD 65). Courtesy of the Museum of Ancient Cultures, Macquarie University.



Fig. 4 Bird's eye view of Portus (1588). Courtesy of Sanderus Antiquariaat, Ghent.



Fig. 5 Cast of the Torlonia Relief (third century AD). Photo by author.





Fig. 6 Detail of war galley. Fresco, Temple of Isis in Pompeii. Courtesy of Karl, Naples.

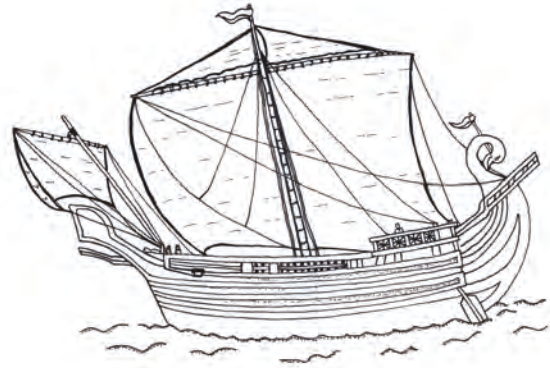


Fig. 7 Line drawing of the Sidon Sarcophagus, National Museum in Beirut (second century AD). Courtesy of Raoul McLaughlin.



Fig. 8 Mosaic from the Piazzale delle Corporazioni, Ostia. Photo by author.



Fig. 9 Mosaic from the Piazzale delle Corporazioni, Ostia. Photo by author.

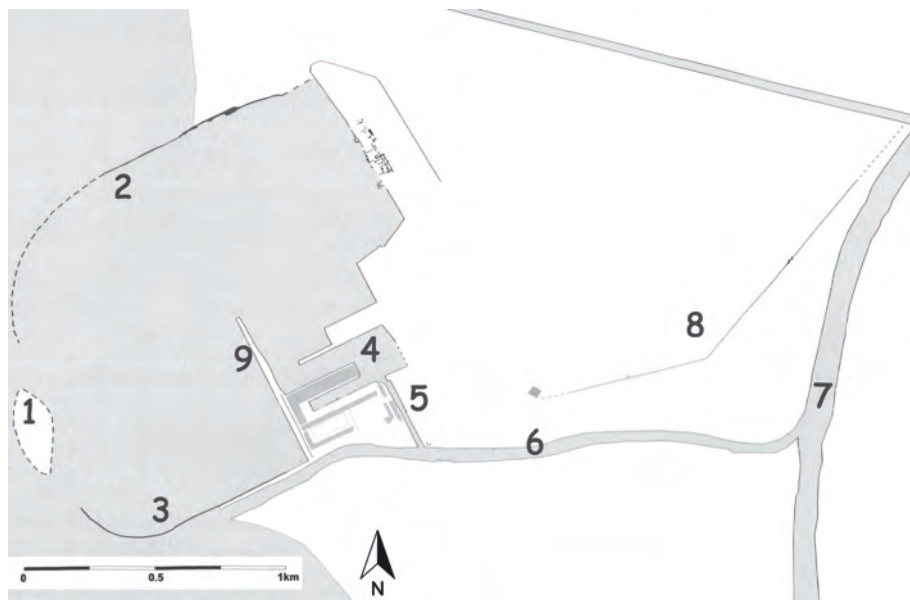


Fig. 10 Plan of Claudian Harbour in the first century AD. Adapted from Keay et al. 2005a, Fig. 8.1 – 1: Lighthouse Island 2: Northern Mole 3: Southern Mole 4: Darsena 5: Transverse canal 6: Fossa Traiana (Neronian) 7: Tiber River 8: Course of Neronian aqueduct 9: Portico of Claudius.



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